

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claims 1-10 (canceled).

11. (currently amended) An ink-jet recording apparatus comprising:

a containing member which contains a recording medium which has a base member and granular material coated on both sides of the base member, wherein, to prevent the blurring of ink into the other side, the thickness of the base member falls within a range between 100 micrometers through 500 micrometers, and the amount of the granular material falls within a range between 10 g/m² and 100 g/m² on each of both sides and roughness of the surfaces of the recording medium coated granular material is smaller than the roughness of the base member;

a printing unit comprising an ink-jet recording head which jets recording liquid onto the recording medium;

a memory configured to hold data of one page volume in one chunk for printing a back-side image on a back side of the recording medium, a front-side image having already been printed on a front side of the recording medium; and

a conveyance unit and a conveyance path for conveying the recording medium, ~~one side of which has been already printed~~ the front-side image having already been printed on the front side of the recording medium, into the printing unit again in order to print an image onto the other side thereof,

~~; and said ink jet recording apparatus enables~~ wherein the printing unit ~~to print images~~

prints the back-side image on the back-side of the recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other— vertical orientation of the back-side image printed on the back side of the recording medium coincides with vertical orientation of the front-side image printed on the front side of the recording medium,

wherein :—~~said ink-jet recording apparatus has a memory which can hold data of one page volume in one chunk that is used for printing image on the back side of the recording medium, front side of which has been already printed; and~~ said ink-jet recording apparatus sends the image data to the ink-jet recording head in the reverse order so that the image data is printed on the back side of the recording medium from bottom to top direction.

Claims 12-21 (canceled).

22. (previously presented) The ink-jet recording apparatus as claimed in claim 11, wherein top and bottom of the image on the front side of the recording medium coincide with top and bottom of the recording medium, and top and bottom of the image on the back side of the recording medium coincide with the top and bottom of the image on the front side of the recording medium.

23. (currently amended) An ink-jet recording apparatus comprising:

a containing member containing a recording medium having a base member and granular material coated on both sides of the base member, wherein the thickness of the base member falls within a range between 100 micrometers through 500 micrometers, and the amount of the

granular material falls within a range between 10 g/m^2 and 100 g/m^2 on each of both sides and roughness of the surfaces of the recording medium coated granular material is smaller than the roughness of the base member;

a printing unit comprising an ink-jet recording head which jets recording liquid onto a recording medium;

a memory configured to hold data of one page volume in one chunk ~~that is used~~ for printing a back-side image on a back side of the recording medium, a ~~front-side of the recording medium~~ front-side image having already been printed on a front side of the recording medium; and

a conveyance unit and a conveyance path for conveying the recording medium, ~~the front side of the recording medium having been already printed~~ the front-side image having already been printed on the front side of the recording medium, into the printing unit again in order to print ~~[[an]]~~ the back-side image onto the back side of the recording medium,

wherein:

said ink-jet recording apparatus sends the image data for the back side to the ink-jet recording head in the reverse order so that the image data is printed on the back side of the recording medium from bottom to top direction, and

~~the vertical orientations of the images printed on the front and back sides, respectively, of the recording medium coincide with each other~~ vertical orientation of the back-side image printed on the back side of the recording medium coincides with vertical orientation of the front-side image printed on the front side of the recording medium.

24. (new) An ink-jet recording apparatus comprising:

a containing member containing a recording medium having a base member and granular material coated on both sides of the base member;

a printing unit comprising an ink-jet recording head configured to jet recording liquid onto a recording medium;

a memory configured to hold data of one page volume in one chunk for printing a back-side image on a back side of the recording medium, a front-side image having already been printed on a front side of the recording medium; and

a conveyance unit and a conveyance path for conveying the recording medium, the front-side image having already been printed on the front side of the recording medium, into the printing unit again in order to print the back-side image onto the back side of the recording medium,

wherein the image data in said memory for the back-side image is sent to the ink-jet recording head in a reverse sequence so that the image data is printed on the back side of the recording medium from bottom to top direction.

25. (new) The ink-jet recording apparatus as claimed in claim 24, wherein the printing unit prints the back-side image on the back-side of the recording medium such that vertical orientation of the back-side image printed on the back side of the recording medium coincides with vertical orientation of the front-side image printed on the front side of the recording medium.

26. (new) The ink-jet recording apparatus as claimed in claim 24, wherein the granular material is substantially symmetrically coated on both sides of the base member with respect to a

center line of the base member.

27. (new) The ink-jet recording apparatus as claimed in claim 24, further comprising a heating unit provided in the conveyance path.

28. (new) The ink-jet recording apparatus as claimed in claim 24, further comprising a containing member configured to contain temporarily the recording medium on the conveyance path.

29. (new) The ink-jet recording apparatus as claimed in claim 24, wherein the ink-jet recording head has a multi-nozzle-type ink-jet recording head which jets ink with a frequency substantially from 1 kHz through 40 kHz per nozzle on demand and configured to jet a plurality of colors of ink, and the recording medium is conveyed to a position that faces the nozzle surfaces of the multi-nozzle-type ink-jet recording head during recording.

30. (new) The ink-jet recording apparatus as claimed in claim 29, wherein the nozzles of the ink-jet recording head are arranged longitudinally so as to cover a printing width of the recording medium on which the image is to be printed, and said nozzles have a cross-sectional area in a range between $10\ \mu\text{m}^2$ and $600\ \mu\text{m}^2$, and the ink-jet recording head has 1000 through 100000 nozzles in the nozzle arrangement density of 400 dpi through 3200 dpi.

31. (new) The ink-jet recording apparatus as claimed in claim 30, further comprising a recording medium heating unit having a heating range extending along a direction perpendicular

to the conveyance direction so as to cover a range larger than the printing width of the recording medium.